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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/920,787	08/01/2001	James Bryce Sutherland	OR02-13601	5150

22835 7590 12/21/2004

PARK, VAUGHAN & FLEMING LLP  
508 SECOND STREET  
SUITE 201  
DAVIS, CA 95616

EXAMINER

NGUYEN, VAN H

ART UNIT	PAPER NUMBER
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2126

DATE MAILED: 12/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/920,787

Applicant(s)

SUTHERLAND, JAMES BRYCE

Examiner

VAN H NGUYEN

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/11/01.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. This Office Action is in response to the application filed on August 01, 2001.
2. Claims 1-45 are presented for examination.

#### ***Information Disclosure Statement***

3. The Applicants' Information Disclosure Statement, filed December 11, 2001, has been received, entered into the record, and considered. See attached form PTG 1449.

#### ***Specification***

4. The abstract of the disclosure is objected to because the abstract appears to be written as if it were a claim and is not in narrative form. See MPEP § 608.01(b). Appropriate correction is required.
5. There appears to be a typographical error in the specification (page 1, line 35-page 2, line 1), "*follow the the BMP model*" should read "*follow the BMP model*". Appropriate correction is required.

***Claim Objections***

6. Claims 1, 12, 23, 31, 33, 41, and 43-45 are objected to because of the following informalities:

*"notification of an event"* (claim 1, line 4; claim 12, line 5; claim 23, lines 4-5; claim 31, line 4; claim 33, lines 4-5; claim 43, line 5; claim 44, line 4; claim 44, line 4; and claim 45, line 5) should read "a *notification of an event*". Appropriate correction is required.

***Claim Rejections - 35 USC § 101***

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claims 23-42 and 45 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

- a. Claims 23 and 31 recites an object change integration system in the preamble only, the body of the claims merely contain software components. Therefore, the claims are a program per se and are not tangibly embodied and therefore not a "system".
- b. Claims 33 and 41 appear to be a software per se that is non-statutory subject matter.

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- c. Claim 45 claims "a computer data signal embodied in a carrier wave" and is not tangibly embodied and therefore non-statutory.
- d. Dependent claims 24-30, 32, and 34-40 are rejected for fully incorporating the deficiencies of their base claims.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Skinner et al.** (U.S. 6,085,198) in view of **Forthman et al.** (U.S. 6,085,198).

11. **As to claim 1:**

- a. Skinner teaches the invention substantially as claimed including a method for integrating object changes (*e.g., change MGMT 302B; fig. 9*) occurring to an object (*e.g., change object; fig. 9*) in a first object storage system (*e.g., application server 307; fig. 9*) with a second object storage system (*e.g., database server 311; fig. 9*), the method comprising steps of:
  - (i) receiving from the first object storage system notification of an event relating to an object in the first object storage system (*e.g., Server-side*

*update management component 304B acts in association with change management component 302B to ensure that notices regarding changes to data are transmitted to all interested elements of the system. Under the active notification scheme using interest objects...maintains a registry of client and servers that wish to be notified when a designated data object is changed; col.12, lines 21-32);*

- (ii) *setting up a representation of the object in the second object storage system in response to the notification (e.g., the transaction begins in application logic and GUI component 301A, when the application logic initiates a change to a data object, for example, by calling one of the data object's attribute "set" accessor methods. In response to the method call, the data object calls change management component 302A, where a corresponding change object is obtained; col. 15, lines 8-20); and*
- (iii) *determining object changes made to the object in the first object storage system using the representation in the second object storage system (e.g., when the transaction is closed, change management component 302A provides the list of change objects to communication management component 305A. Communication management component 305A serializes and transmits the list of change objects to communication management component 305B at application server 307.... Datastore management component 308, in association with JDBC component 309, converts the updated data objects into database calls (e.g., SQL calls) to*

*database server 311 to update the database records corresponding to the updated data objects; col.15, lines 22-38).*

- b. Skinner, however, does not specifically teach “integrating the determined object changes”.
- c. Forthman teaches integrating the determined object changes (*e.g., anytime a change is made to the graphical representation of a network object, the change is immediately reflected in the relational database. Conversely, anytime a change is made in the relational database the change is immediately reflected in the graphical representation of the network object; col.3, lines 20-27).*
- d. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Forthman with Skinner because Forthman’s teachings would have provided the capability for building designs upon other designs by presenting the user with the appropriate versions of objects from earlier designs; allowing changes to the ordering of designs within restrictions based on the dependencies between the designs; and providing the user the ability, to stay up-to-date on current network information, review previous network configurations and work on as many proposed network configurations as desired.

12     **As to claim 2:**

Skinner teaches receiving a method call associated with the event from the first object storage system (*col.11, lines 22-29 and col.12, lines 55-58).*

13.     **As to claim 3:**

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Skinner teaches searching for a main copy of the object (*col.10, lines 60-65*) in the second object storage system.

14. **As to claim 4:**

Skinner teaches loading a main copy of the object from a database into the second object storage system (*col.12, lines 8-12*).

15. **As to claim 5:**

Skinner teaches merging the object changes into the main copy of the object contained in the second object storage system (*col.31, line 65-col.32, line 5*).

16. **As to claim 6:**

Skinner teaches creating a working copy for tracking the object changes and an original state copy for maintaining the original state of the object (*col.10, lines 60-65*); modifying the working copy according to the object changes in the first object storage system (*col.15, lines 11-20*); and comparing the working copy of the object and the original state copy of the object to determine the differences between the two copies (*col.15, lines 21-24*).

17. **As to claim 7:**

Skinner teaches storing the object changes in a change storage copy of the object in the second object storage system (*col.15, lines 29-33*).

18. **As to claim 8:**

Skinner teaches modifying the representation in the second object storage system with the object changes in the first object storage system (*see fig. 9 and the associated text*).

19. **As to claim 9:**



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Skinner teaches committing the object changes to a database (*col.15, lines 38-48*).

20. **As to claim 10:**

Skinner teaches registering an event listener with the first object storage system to obtain notification of events relating to an object in the first object storage system (*col.12, lines 12-30*).

21. **As to claim 11:**

Skinner teaches receiving a notification to undo actions in a transaction prior to the notification (*col.15, lines 38-47*), the notification being received up until after changes are updated to a database (*col.15, lines 42-43*); and undoing the actions (*col.15, lines 40-43*).

22. **As to claims 23-29:**

Note the rejections of claims 1, 3-7, and 9, respectively. Claims 23-29 are the same as claims 1, 3-7, and 9, except claims 23-29 are *system claims* and claims 1, 3-7, and 9 are *method claims*.

23. **As to claim 30:**

The rejection of claim 11 above is incorporated herein in full. Additionally, Skinner further teaches a rollback notification unit (*col.11, lines 65-67*).

24. **As to claims 33-39:**

Note the rejections of claims 1, 3-7, and 9, respectively. Claims 33-39 are the same as claims 1, 3-7, and 9, except claims 33-39 are *persistence manager connector claims* and claims 1, 3-7, and 9 are *method claims*.

25. **As to claim 40:**

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The rejection of claim 11 above is incorporated herein in full. Additionally, Skinner further teaches a rollback notification unit (*col.11, lines 65-67*).

26. **As to claim 43:**

Note the rejection of claim 1 above. Claim 43 is the same as claim 1, except claim 43 is a *computer readable media claim* and claim 1 is a *method claim*.

27. **As to claim 44:**

Note the rejection of claim 1 above. Claim 44 is the same as claim 1, except claim 44 is a *computer program product claim* and claim 1 is a *method claim*.

28. **As to claim 45:**

Note the rejection of claim 1 above. Claim 45 is the same as claim 1, except claim 45 is a *computer data signal claim* and claim 1 is a *method claim*.

29. **As to claim 12:**

The rejection of claim 1 above is incorporated herein in full. Additionally, Skinner further teaches a persistence manager (*e.g., Database server 11...structured persistent store; col.15, lines 9-10*) and an entity bean (*e.g., JavaBeans; col.7, line 65- col.8, line 19*).

30. **As to claim 13:**

Skinner teaches an Enterprise JavaBeans container (*col.7, line 65- col.8, line 19*).

31. **As to claims 14-21:**

Refer to claims 2-7 and 9-10 above, respectively.

32. **As to claim 22:**

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The rejection of claim 11 above is incorporated herein in full. Additionally, Skinner further teaches a rollback notification unit (*col.11, lines 65-67*).

33. **As to claims 31 and 32:**

Note the rejections of claims 12 and 13 above. Claims 31 and 32 are the same as claims 12 and 13, except claims 31 and 32 are *system claims* and claims 12 and 13 are *method claims*.

34. **As to claims 41 and 42:**

Note the rejections of claims 12 and 13 above. Claims 41 and 42 are the same as claims 12 and 13, except claims 41 and 42 are *persistence manager connector claims* and claims 12 and 13 are *method claims*.

***Conclusion***

35. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- (i) Mandal et al. (US 6772178) teaches "Method and apparatus for managing remote data replication in a distributed computer system."
- (ii) Ng et al. (US 6609133) teaches "Integrating both modifications to an object model and modifications to a database into source code by an object-relational mapping tool."
- (iii) Williams (US 6591272) teaches "Method and apparatus to make and transmit objects from a database on a server computer to a client computer."

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- (iv) Hammack et al. (US 6449624) teaches "Version control and audit trail in a process control system."
  - (v) Sadiq et al. (US 6029177) teaches "Method and system for maintaining the integrity of a database providing persistent storage for objects."
  - (vi) Yang "Change management in object-oriented databases" 1993 IEEE, pp. 238-244.
  - (vii) Pawlan "Enterprise JavaBeans" 1998, pp. 1-10.
36. Any inquiry concerning this communication or earlier communications from the examiner should be directed to VAN H. NGUYEN whose telephone number is (571) 272-3765. The examiner can normally be reached on Monday-Thursday from 8:30AM - 6:00PM. The examiner can also be reached on alternative Friday.
37. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756.
38. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.
39. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**Any response to this action should be mailed to:**

Commissioner for patents

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12/12/04



Van H. Nguyen